Applicant : Georg Bogner et al. Attorney's Docket No.: 12406-0127001 / P2001,0258 Serial No. : 10/683,712 US N

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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-29. Canceled.

30. (Currently Amended) A radiation-emitting component, comprising:

a radiation-emitting <u>semiconductor</u> chip at least partially sheathed with a radiation-permeable compound; and

one of:

the a leadframe of claim 1; and

a housing for light-emitting components having[[:]] <u>a</u> the leadframe of claim 1., wherein the leadframe comprises:

a mount part having:

at least one wire connecting area;

an opening formed therein and extending completely through the

mount part; and

at least one external electrical connecting strip; and

a separately manufactured thermal connecting part disposed in said opening and fastened into said mount part to form an electrical connection with the at least one external electrical connecting strip, said thermal connecting part having at least one chip mounting area and a reflector well surrounding said chip mounting area,

wherein the thermal connecting part extends through the opening in the mount part and connects to the mount part at the opening to transfer heat away from the mount part.

wherein said radiation-permeable compound is a plastic compound; and

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wherein said radiation-permeable compound has a volume described by the formula $V \le qH$, where H is a height of said chip and q is a scaling factor having a value that is less than 10 mm².

- 31-33. Canceled.
- 34. (Currently Amended) The radiation-emitting component according to claim [[33]] <u>30</u>, wherein said plastic compound is one of a casting resin and a molding compound.
- 35. (Currently Amended) The radiation-emitting component according to claim [[33]] <u>30</u>, wherein said plastic compound contains at least one of a group consisting of an epoxy resin, an acryl resin, a silicone resin, and a mixture of at least two of said epoxy resin, said acryl resin, and said silicone resin.
- 36. Canceled.
- 37. (Currently Amended) The radiation-emitting component according to claim [[36]] <u>30</u>, wherein q is a scaling factor having a value approximately equal to 7 mm².
- 38. (Currently Amended) The radiation-emitting component according to claim 30, wherein said chip is a semiconductor chip is mounted on said chip mounting area of said thermal connecting part.
- 39. (Original) The radiation-emitting component according to claim 38, wherein said chip is connected to said chip mounting area by one of an adhesive bond and a solder.
- 40. (Original) The radiation-emitting component according to claim 38, wherein said chip is one of adhesively bonded and soldered to said chip mounting area.

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41. (Original) The radiation-emitting component according to claim 39, wherein said chip is mounted on said chip mounting area by a silver solder.

- 42. (Original) The radiation-emitting component according to claim 41, wherein said silver solder has a melting temperature greater than 260° C.
- 43. (Original) The radiation-emitting component according to claim 30, further comprising a wire connection electrically conductively connecting said chip to said wire connecting area.
- 44-57. Canceled.
- 58. (Currently Amended) The <u>leadframe radiation-emitting component</u> according to claim [[1]] <u>30</u>, wherein the leadframe is a surface-mountable component.
- 59-63. Canceled.
- 64. (Currently Amended) A radiation-emitting component, comprising: a radiation-emitting chip at least partially sheathed with a radiation-permeable compound, and one of:
 - a leadframe; and
 - a housing for light-emitting components having a leadframe,
 - wherein the leadframe comprises:
- a mount part having at least one wire connecting area, an opening formed therein and extending completely through the mount part, and at least one external electrical connecting strip; and
- a separately manufactured thermal connecting part disposed in said opening and fastened into said mount part to form an electrical connection with the at least one

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external electrical connecting strip, said thermal connecting part having at least one chip mounting area,

wherein the thermal connecting part extends through the opening in the mount part and connects to the mount part at the opening to transfer heat away from the mount part,

wherein the chip is a semiconductor chip, the radiation-permeable compound is a plastic compound, and the radiation-permeable compound has a volume described by the formula $V \le qH$, where H is a height of said chip and q is a scaling factor having a value that is less than 10 mm².

- 65. (New) The radiation-emitting component according to claim 64, further comprising a housing base body formed from a molding compound, wherein said leadframe is embedded in said base body to pass out said connecting strip from said base body, said thermal connecting part has a thermal connecting surface thermally connectable from the outside, and the housing is a surface mounted housing having a bearing surface for the surface mounting with the thermal connecting surface extending to the bearing surface for conducting heat to an exterior surface to which the bearing surface mounts the housing.
- 66. (New) The radiation-emitting component according to claim 65, wherein the chip mounting area and the thermal connecting surface are on opposite sides of the thermal connecting part.
- 67. (New) The radiation-emitting component according to claim 66, wherein: said base body has a radiation outlet window; and said thermal connecting part is embedded in said base body to dispose said chip mounting area in said radiation outlet window.

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68. (New) The radiation-emitting component according to claim 67, wherein said radiation outlet window has side walls in the form of reflector surfaces.

- 69. (New) The radiation-emitting component according to claim 67, wherein said radiation outlet window has reflective side walls.
- 70. (New) The radiation-emitting component according to claim 68, wherein: said thermal connecting part has a reflector well forming a first part of a reflector; said side walls of said radiation outlet window form a second part of said reflector; and said well merges to said second part.
- 71. (New) The radiation-emitting component according to claim 70, wherein: a chip is to be mounted on said chip mounting area; and an overall height of said reflector is no greater than four times a height of the chip.
- 72. (New) The radiation-emitting component according to claim 71, wherein: the chip has a main emission direction; said reflector well has reflector walls; said radiation outlet window has reflector surfaces; and said reflector walls and said reflector surfaces are at different angles with respect to the main emission direction.
- 73. (New) The radiation-emitting component according to claim 72, wherein an angle between said reflector walls and the main emission direction is greater than an angle between said reflector surfaces and the main emission direction.
- 74. (New) The radiation-emitting component according to claim 64, wherein said leadframe is a surface mounted leadframe.

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75. (New) The radiation-emitting component according to claim 30, wherein said mount part has one of a bracket and an eye into which said thermal connecting part is fastened.

- 76. (New) The radiation-emitting component according to claim 30, wherein said thermal connecting part and said mount part are connected by at least one of the group consisting of a crimped connection, a riveted connection, a soldered connection, and a welded connection therebetween.
- 77. (New) The radiation-emitting component according to claim 30, further comprising a connection between said thermal connecting part and said mount part, said connection being at least one of a crimped connection, a riveted connection, a soldered connection, and a welded connection.
- 78. (New) The radiation-emitting component according to claim 30, wherein said wire connecting area is disposed at a higher level than said chip mounting area as viewed from said chip mounting area.
- 79. (New) The radiation-emitting component according to claim 78, wherein: said reflector well has an edge; and said wire connecting area is disposed above said edge as viewed from said chip mounting area.
- 80. (New) The radiation-emitting component according to claim 30, wherein: a chip is to be mounted on said chip mounting area; and said reflector well has height no greater than twice a height of the chip.

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81. (New) The radiation-emitting component according to claim 30, said thermal connecting part having at least one chip mounting area, and comprising at least one of copper, aluminum, molybdenum, iron, nickel, and tungsten.

- 82. (New) The radiation-emitting component according to claim 30, wherein said chip mounting area has a surface coating for improving mounting of a chip.
- 83. (New) The radiation-emitting component according to claim 82, wherein said surface coating is at least one of a silver coating and a gold coating.
- 84. (New) The radiation-emitting component according to claim 30, wherein said leadframe comprises at least one of copper and iron.
- 85. (New) The radiation-emitting component according to claim 30, wherein the radiation-emitting component is a light-emitting diode component.